

Nijland, H.; Vij, S. and Warner, J. 2026. "What will happen to the commons?"  
Contesting discourses and the future of the wetlands in urbanising Guwahati, India  
Water Alternatives 19(1): 50-66



---

## "What Will Happen to the Commons?" Contesting Discourses and the Future of the Wetlands in Urbanising Guwahati, India

### Hilde Nijland

Sociology of Development and Change, Wageningen University and Research, Wageningen, The Netherlands;  
hilde\_nijland99@hotmail.com

### Sumit Vij

Sociology of Development and Change, Wageningen University and Research, Wageningen, The Netherlands;  
sumit.vij@wur.nl

### Jeroen Warner

Sociology of Development and Change, Wageningen University and Research, Wageningen, The Netherlands;  
jeroen.warner@wur.nl

---

**ABSTRACT:** Urban wetlands are essential for sustaining biodiversity, mitigating floods and supporting livelihoods, yet they are among the planet's most threatened ecosystems. In Guwahati, a rapidly urbanising capital city in Northeast India, wetlands are a critical urban commons. They are shared spaces managed and used by urban communities, and are vital to collective wellbeing. They currently face threats from urban agglomeration, and there remains a significant gap in the understanding of how different and often contesting discourses shape perceptions, uses and governance of these wetlands. This research, therefore, addresses the key question: *How are the discourses surrounding Guwahati's wetlands contested?* Employing critical discourse analysis, data collection methods included semi-structured interviews with residents across Guwahati and field observations in the two wetland areas of Deepor Beel and Silsako Beel. Findings suggest that the state (municipal and other line agencies) primarily frames wetlands as a resource for driving urban development – a discourse that is reinforced by the state's practices. This reflects a growing detachment from these ecosystems and a clear progression towards state control and commodification, where wetlands are transformed from urban commons and meaningful 'places' into abstract, commercialised 'spaces'. These discourses are used by both the state and several residents, but are challenged by environmentally conscious residents and civil society groups advocating for wetland preservation. These contestations illustrate the complex and conflicting values attributed to urban wetlands. Currently, the state's modernity agenda seems to take precedence, resulting in their increasing commodification.

**KEYWORDS:** Urban commons, contested discourses, wetlands, Guwahati, India

---

### INTRODUCTION

Deepor Beel, or 'lake of elephants' in Assamese, is a freshwater lake and Guwahati's largest wetland. It is located in the southwestern corner of the city of Guwahati, India (Ramsar Sites Information Service, 2002; Karmakar, 2021). Pradip (a pseudonym) is a middle-aged dairy farmer, local activist, and lifelong resident of Guwahati. He and his wife live about 500 metres from Deepor Beel. Together, they also operate a souvenir shop that sells local tribal products. As Pradip puts it,

We derive a lot of benefits from Deepor Beel (...). [The more that it] is degrading day by day, [the] more it's impacting our livelihood (...). If Deepor Beel is no more, the atmosphere or the environment of Guwahati will degrade (...). If it continues like business as usual, the next generation will be deprived of it.

Pradip's emphasis on the looming threat that wetland degradation poses to urban sustainability and quality of life underscores the critical importance of wetlands to Guwahati city. Urban wetlands are considered crucial for biodiversity support, flood control, microclimate regulation and groundwater recharge; they are also key to livelihoods and cultural identity, serving as venues for traditional fishing, boating and religious practices (Pritcharda, 2022; Saikia, 2019; Sharma et al., 2019).

In the city, however, other discourses also exist in which wetlands are increasingly framed in terms of their economic value for urban growth. This narrative legitimises encroachment, privatisation and commodification by the state, and ultimately leads to the depletion of the wetlands' status as urban commons (Gidwani and Baviskar, 2011; Hazarika and Kumar, 2022; Kornberger and Borch, 2015). In this way, it resembles a global trend of depleting urban commons that can be observed worldwide, but especially in cities in developing countries such as India (D'Souza and Nagendra, 2011; Unnikrishnan et al., 2016; Vij and Narain, 2016; Zimmer et al., 2020).

We will further theorise this concept in the next section. In a nutshell, however, 'urban commons' refers to communal assets in cities, which are cared for through collective stewardship that ensures equitable access and benefits for all (Gidwani and Baviskar, 2011; Huron, 2015; Kornberger and Borch, 2015). In accordance with that definition, Guwahati's wetlands are shared resources that have always been collectively governed and used, and can thus be considered urban commons (D'Souza and Nagendra, 2011; Unnikrishnan et al., 2016; Vij and Narain, 2016).

Guwahati's wetlands were once considered 'places', that is, areas imbued with social, cultural and ecological significance, with strong historical community connections (Díaz-Pinzón et al., 2024). Increasingly, however, they are becoming 'spaces', which is to say abstract, commodified areas that lose their unique characteristics and are treated as functional zones for urban development (Hazarika and Kumar, 2022; Massey, 1994). The disappearance of Guwahati's wetlands and their shift from being places to spaces together create fertile ground for contesting discourses about the future of these water bodies.

Despite the wetlands' significant role as urban commons in the functioning of an agglomerating Guwahati, little attention has been paid to emerging contestations over different development discourses. This study seeks to fill that gap by addressing the key research question: *How are the discourses surrounding wetlands in Guwahati contested?* Through critical discourse analysis (CDA) inspired by Fairclough (1995), we aim to bring forward the diverse voices in this debate, illustrating how contestation over these ecological sites is rooted in uneven power dynamics. These dynamics allow certain voices, particularly state-driven ones, to dominate while others are completely marginalised. This is leading to the disappearance of Guwahati's urban commons.

The remainder of the article is structured as follows. The next section explores the concepts of urban commons, 'place', and 'space', discussing their implications and relevance for the wetlands in Guwahati. This is followed by a section that provides the geographical context of the study area and outlines the research approach and methods employed. The section after that presents the findings of this study, in which we elaborate on three contesting discourses surrounding Guwahati's wetlands, underscoring the power of development discourses, ecological perspectives, and community challenges. In the final sections, we reflect on how these competing discourses are shaping the debate over wetland governance in Guwahati and we consider the broader implications of the contestation over urban commons for urban governance in the Global South.

Figure 1. Deepor Beel: Guwahati's largest wetland.



Source: Sumit Vij, 2023.

### THEORISING URBAN COMMONS

Traditionally, 'commons' are understood as common-pool resources and spaces that are collectively utilised, managed and benefitted from through shared norms and practices that are referred to as 'commoning' (Linebaugh, 2009). Some commons, such as cultural heritage or knowledge systems, can be used by one person without limiting their availability to others. Other commons, however, such as grazing land or fisheries, face subtractability, with use by some individuals reducing availability to others (Zetland, 2022). One of the earliest and most influential works to popularise the concept of the commons was Garret Hardin's 1968 essay entitled *Tragedy of the Commons*, which focused on the commons, showcasing the characteristic of subtractability. In his essay, Hardin employed the metaphor of a common pasture to illustrate how individual self-interest eventually depletes the shared resource; he proposed either state management or private ownership as a solution (Hardin, 1968). Hardin's work sparked widespread interest and debate, prompting other scholars to explore community-based governance of the commons (see, for example, Ostrom, 1990) and the effects of capitalism on the commons (see Linebaugh, 2009).

For a long time, scholars exploring commons primarily focused on rural areas and on cultural commons such as language or the internet. In contrast, the concept of urban commons emerged only in the early 21st century, prompted by global urbanisation and the associated challenges of privatisation and neoliberal policies that undermine the practice of commoning (Huron, 2017; Lee and Webster, 2006).

The notion of urban commons is not new in the sense that it reflects the transposing of the ancient practice of commoning from its roots in natural and rural settings to the cityscape. *Urban* commons, however, are considered distinct from Hardin and Ostrom's concept of rural common-pool resources. Rural resource commons are traditionally built on intimate communal relationships involving relatively small populations (see, for example, Ostrom's 1990 case studies of irrigation systems in rural Spain and Nepal or of cattle grazing on Swiss alpine pastures). Urban commons, in contrast, can involve millions of unrelated individuals. The scale and social differentiation associated with cities give a distinct character to urban commons, and city dwellers interact with, and benefit from, them in complex and varied ways.

Those who use and benefit from rural commons can be expected to be directly aware of their value; urban residents, on the other hand, may be less so or completely unaware (Huron 2015, 2017; Kip et al., 2015). The last and perhaps most significant distinction between traditional (rural) and urban commons relates to the complexity of interactions of the latter and the fluidity of city boundaries; together these contribute to a unique mode of value creation. Unlike the traditional rural commons in Hardin's and Ostrom's work, urban commons typically derive value from patterns of consumption and from the perspectives of those who interact with them. They thus thrive on relational and cultural value creation; this contrasts with (either subtractable or non-subtractable) rural commons, which often exist within tightly knit communities with shared cultural norms, underscoring intrinsic value over the dynamic, network-driven value creation that is typical of urban commons (Kornberger and Borch, 2015).

These differences highlight that urban commons are not merely commons located within cities; rather, they constitute a distinct category that is shaped by the complex social, cultural and material relationships inherent to urban spaces. While urban commons are often imagined as parks or streets (Foster, 2011), natural ecosystems such as wetlands can also function as critical urban commons (Gidwani and Baviskar, 2011). Though recognising the subtractable nature of urban wetlands, conceptualising Guwahati's wetlands as urban commons emphasises how their value is closely tied to collective urban life. They offer a wide range of ecological, as well as social and economic, advantages both to people living in their vicinity and to the broader city population (Saikia, 2019; Sharma et al., 2019).

Theorising Guwahati's wetlands as urban commons also requires engaging with the theoretical distinction between 'place' and 'space'. Space refers to a defined area in the physical environment that is primarily valued for its practical functions; place, on the other hand, can be understood as an area defined by a network of social, cultural and emotional relations, one that is cherished for its intrinsic significance rather than solely for its utility (Massey, 1994). The concept of place is thus concerned with the meanings, lived experiences, stories and memories associated with a space. In the context of Guwahati, one can understand the geographic location of wetlands and their utilitarian valuation as spaces, and the deep-rooted cultural, social and ecological relations embedded within the wetlands as places.

The notion of Guwahati's wetlands as places or spaces is largely influenced by the ideas of modernity which embody the widespread desire for (urban) environments to embrace technological innovation and scientific rationality. This naturally aligns with a strong focus on modern, large, centralised and expert-knowledge-driven infrastructure, encapsulated in the 'modern infrastructure ideal' (Vij et al., 2025). This concept represents a set of norms and assumptions about infrastructure development that is rooted in the Western world; it emphasises Western engineering expertise, rational planning, and control of infrastructure. Such an aspiration for modern infrastructure introduces a worldview that favours productivity and profitability, thereby significantly altering how people perceive and interact with their natural environment, whether as places or spaces (Friedland, 1992; Furlong, 2014; Graham and Marvin, 2001; Lawhon et al., 2023). Edward Relph, a Canadian humanistic geographer, discussed the phenomenon of 'places' turning into 'spaces' in this context. Using the term 'placelessness', he raised concerns about how, in a modernising world, people find it increasingly difficult to feel connected (Relph, 1976).

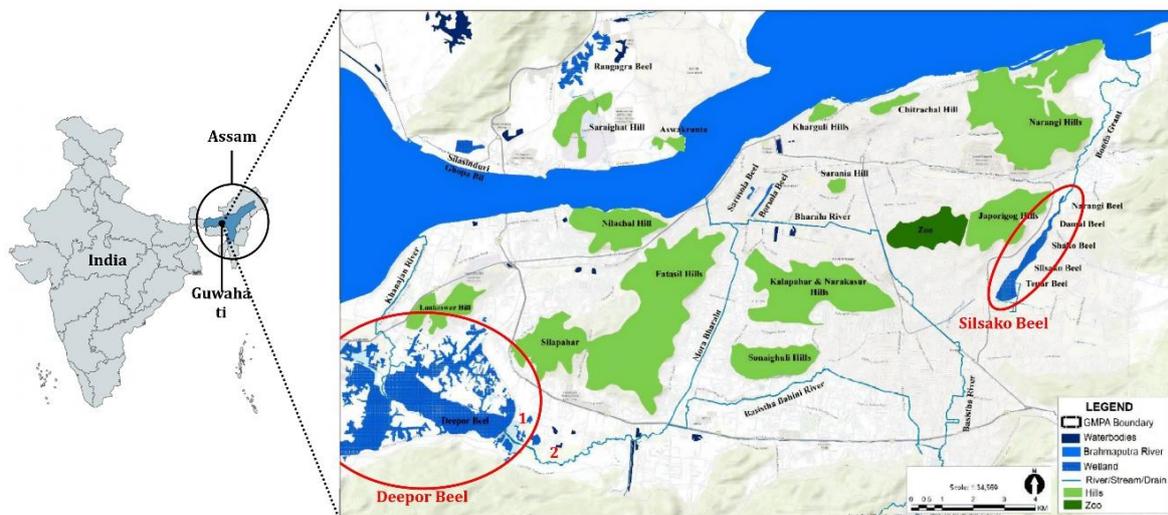
We do not argue that modern infrastructure is a failure; we suggest, however, that the 'modern infrastructure ideal' does not necessarily work in complex, heterogeneous cities of the Global South, such as Guwahati. Nature is understood as being unreasonable and unpredictable (Swyngedouw, 2015; Vij et al., 2025), while modernity ideals are built on a different, more technocratic understanding of nature, which also underpins the infrastructure that shapes it. This critique resonates with urban political ecology (UPE) scholarship, which highlights how heterogeneous infrastructures, informality and uneven governance arrangements complicate the universalised modern infrastructure ideal (Alba et al., 2022; Lawhon et al., 2014; Roy, 2009).

## METHODOLOGY

### Study area and context

This study was conducted in Guwahati, the capital of the state of Assam in Northeast India. This bustling city is situated on the banks of the Brahmaputra River, one of the world's largest river systems. The south bank of Guwahati (Figure 2) currently showcases the rapid development of its urban neighbourhoods (Hemani and Das, 2016). Guwahati is currently one of India's fastest-growing cities; its estimated population of less than 200,000 in 1970 had ballooned to almost 1.2 million by 2023 and is expected to exceed 1.5 million by 2035 (Borah and Gogoi, 2012; World Population Review, n.d.).

Figure 2. Location and map of the study area.



Source: Adapted from Synopsis of Draft Revised Master Plan for GMA 2045, 2024

Note: The empirical field sites highlighted are Silsako Beel (consisting of multiple smaller wetlands) and Deepor Beel, as well as the old (1) and new (2) dump yards in the Deepor Beel area.

The city of Guwahati is characterised by a network of wetlands; of these, Deepor Beel is by far the largest, with Silsako Beel and Borsola Beel also being important. Over the years, however, Guwahati's wetlands have experienced a rapid decline in both area and ecological quality due to urban expansion, infrastructural development and pollution (Gogoi, 2013; Mozumder et al., 2014). In 2008, Deepor, Silsako and Borsola Beel were declared protected water bodies by the Guwahati Water Bodies (Preservation & Conservation) Act, with Bondajan Beel being added as a fourth in 2010; over the years, however, they have only been subject to further degradation (Borah, 2023; Dhyani et al., 2022; Gogoi, 2013).

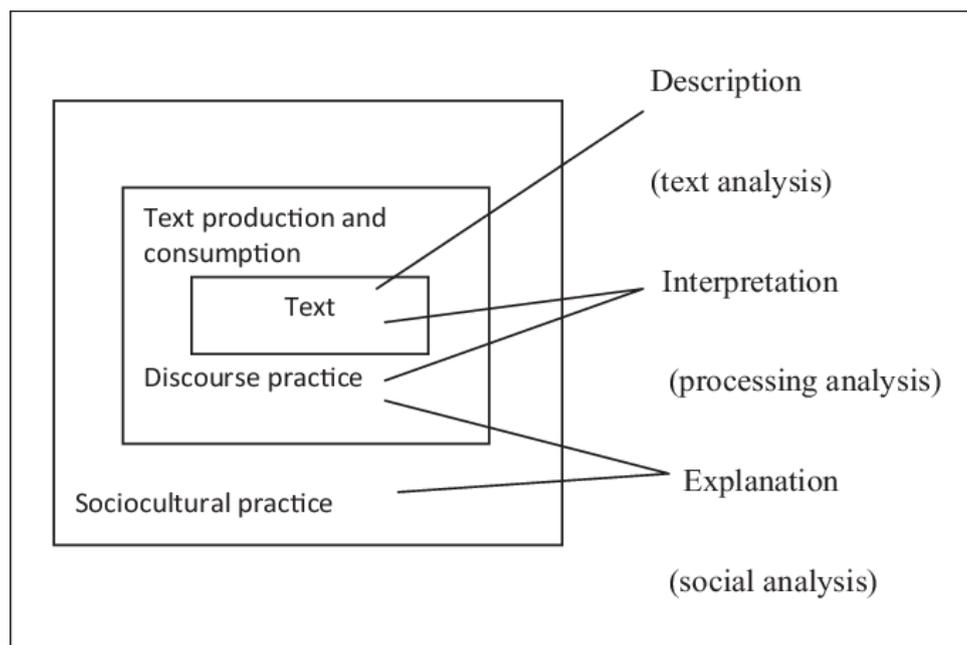
Whereas Silsako, Borsola and Bondajan Beel currently all face existential threats, Deepor Beel continues to function to some extent as a wetland ecosystem, though it is following a similar pattern of degradation (Bera, 2011; Das, 2022; Dhyani et al., 2022). Deepor Beel, as Guwahati's largest and most important wetland, serves a critical function in water retention; it also sustains many rural livelihoods, including fishing, livestock grazing, the collection of aquatic plants, and small-scale agriculture, and provides a habitat for (migratory) species (Saikia, 2019). Wild Asiatic elephants (an endangered species), for example, regularly visit this wetland area to bathe and feed on aquatic vegetation (fox nut). The Beel's survival, however, is being jeopardised by the connection of Pamohi canal which now channels the city's untreated waste into Deepor Beel (Deb et al., 2019) by the 2001 establishment of a railway line (Pandit,

2016), by having two municipal dump yards in its vicinity (the 'old' one from 2005 to 2021 and the 'new' one from 2021)<sup>1</sup> (Figure 2), and by the expansion of road networks and industrial facilities in and around it (Akhtar, 2017; Das, 2024; Gohain and Bordoloi, 2021). The wetland area has also experienced encroachment, including state allocations of land for educational institutions, a large hotel, and various other businesses (Mahadevia et al., 2017).

### Research approach

In this study, 'discourse' refers to all written and spoken forms of language. Our analysis focuses not only on what is being said but on how, why, and to whom it is being said, and on how it conveys meaning and shapes societal perceptions and relations (Wood and Kroger, 2000). This study uses a qualitative research design, drawing on interpretive and critical theory paradigms. Both paradigms acknowledge the diversity of human experiences and the subjectivity of reality; however, interpretive theory focuses more on understanding subjective meanings and interpretations, while critical theory examines power relations and social inequalities (Rehman and Alharthi, 2016). This aligns with the notion that discourses are never neutral; rather, they actively participate in constructing (social) relations and thus are intricately linked to power dynamics (van Hulst et al., 2024; Wood and Kroger, 2000).

Figure 3. Fairclough's three-dimensional framework for critical discourse analysis.



Source: Dahl et al. (2013).

Critical discourse analysis (CDA), inspired by Fairclough's (1995) work, is employed to unpack various contesting discourses surrounding Guwahati's wetlands. CDA explicitly focuses on the dialectical relationship between discourse and social structures, for which Fairclough developed a clear and

<sup>1</sup> The garbage dumping practice at the old dump yard ceased (on paper) in 2021, though occasional illegal dumping of waste at the site continued. In the same year, the dump yard was shifted to a location about half a kilometre away from the old site. This present site is located near the Pamohi River (canal), which is connected to Deepor Beel (*Times of India*, 2024). Many argue that this shift did not halt the contamination of Deepor Beel, since its location is still very close to the wetland and thus the contaminated water from Pamohi will eventually flow into Deepor Beel, affecting its aquatic life.

comprehensive three-dimensional framework comprising (1) text analysis, (2) discursive practice, and (3) social practice (Figure 3). Text analysis involves examining the structure, language, vocabulary and grammatical cohesion of a text. In the case of, for example, a semi-structured interview, the text was the transcript, with specific attention paid to word choice, repetition of key themes, the use of metaphors, and active versus passive voice. Discursive practice then involves an analysis of the contextual processes, studying the contexts in which certain statements are produced and consumed. This means that attention is paid to how the interview was conducted, how the interviewee responded, and how the data was later interpreted. Finally, social practice entails the study of discourse in relation to larger power dynamics and ideologies. It focuses on the broader social, political and cultural context in which the interview took place, studying how the discourses in question are influenced by them while at the same time reinforcing them.

This three-dimensional approach to discourse analysis offered a flexible and adaptable methodological framework that allowed for an in-depth examination of how Guwahati's wetlands are represented in public discourse, without requiring a rigid categorisation of actors. This enabled a more fluid and nuanced exploration of different discourses, shedding light on implicit power dynamics and ideological underpinnings. It thereby enabled the unravelling of what is being said about wetlands, why certain discourses prevail, who benefits from them, and in what ways they are contested.

### Data collection

Data collection took place between November 2023 and January 2024; this was during the dry season in Guwahati, when water levels are significantly lower than during the summer monsoon season. We acknowledge that wetland use and perceptions may vary seasonally; accordingly, our findings reflect dynamics observed during this period, which is characterised by increased economic and recreational activity. Three data collection methods were employed: semi-structured interviews, field observations and policy analysis. For semi-structured interviews, participants in Guwahati (both wetland and non-wetland areas) were selected using purposive sampling that was supplemented by snowball sampling. A few key questions consistently served as the foundation for the inquiries; these included: *How important do you regard wetlands in Guwahati (and why)? How do you envision the role of wetlands in the city's future? What do you hope Guwahati will look like in 20 years?* Interviews were recorded using a voice recorder, with the participant's informed consent. The shortest interview lasted 30 minutes, and the longest was 200 minutes.

The interview data gathered was complemented by a few informal conversations with residents of Guwahati in the Deepor Beel area. This was further triangulated through non-participatory field observations; for instance, the interactions, practices and dynamics within wetland areas were observed without direct engagement. This enabled the identification of practices, behaviours and interactions that contribute to the construction of discourses surrounding wetlands. Field observations were conducted in three main locations: in the Deepor Beel area, in the East and West Boragaon area (where the old and new dump yards are located adjacent to Deepor Beel and the Pamohi River), and in the Silsako Beel area (Figure 2). During the week, field visits were conducted in both the mornings and the afternoons to capture diverse social and ecological activities within and around the wetlands.

Observational notes collected during on-site visits were complemented with photographs and visual documentation. In total, five weeks were spent in the field, during which approximately 100 hours of recorded interview data were collected. Finally, this study included an analysis of policy documents to further elucidate how discourse contestations play out. Two key policy texts were analysed to triangulate and validate the insights gained from interviews and observations; these were the Guwahati Master Plan 2045 and the Guwahati (revised) Smart City Project proposal from Smart City Limited, including its design proposal for the development of Deepor Beel. Although these documents differ slightly in approach and

scope, both of them describe and guide the growth and development of Guwahati over the next few decades.

To safeguard anonymity and enable systematic analysis, all respondents and interviews were categorised by actor type and labelled accordingly. Respondents included government officials (GO), non-governmental organisation representatives (NGO), a media representative (M), academics (AC) and local residents without positions of professional or institutional influence (LR). In one instance, however, the media representative (M1) provided input from both his professional role and his personal perspective as a resident; to accurately capture his dual role, this respondent was assigned a second code (LR1) when providing insights from his personal perspective (a complete list of respondents, with assigned code(s), is provided in Table 1).

Table 1. List of respondents with assigned codes.

Code	Respondent
GO1 – GO6	Government officials
NGO1, NGO2	Non-governmental organisation representatives
AC1, AC2	Academics
M1/LR1	Media representative/male, Borsola Beel area
LR2*	Male, Deepor Beel area
LR3*	Male, vegetable seller, Deepor Beel area
LR4	Female, fruit seller, Deepor Beel area
LR5	Male, local activist, Deepor Beel area
LR6	Female (a) and male (b), Bodo tribe, Deepor Beel area
LR7	Male, head of fishermen community, Azara
LR8	Male, former fisherman, Gotanagar
LR9	Male, North Guwahati
LR10	Male, Jorabat

Note: \* = informal conversation;); LR = local resident.

### Data analysis

All interviews were transcribed, with some translated from Assamese into English. Relevant quotations and insights from each actor were extracted and summarised to provide an extensive overview of their perspectives. Several quotations have been slightly edited for grammar and readability without changing their meaning. The data was analysed qualitatively, with the primary focus on vocabulary, argumentation, figurativeness and rhetorical means, rather than predefined categories or hypotheses. Coding facilitated analysis by identifying recurring themes and patterns (Linneberg and Korsgaard, 2019); for example, figurative expressions such as characterising Deepor Beel as 'the city's kidneys' were coded as expressions of ecological significance. We then allowed the data to present itself naturally in different themes and discourses. This approach was chosen in order to maintain the consistency and integrity of the discourse within the research context. This approach also helped mitigate the researchers' bias, particularly in terms of how the discourses emerged and were formulated. This is mainly due to one of the authors having a long association with the city.

## FINDINGS

### What does the state want?

With Guwahati's swift urban expansion, the state seems to primarily envision the city's wetlands as anchors for urban development, with a focus on leveraging the wetlands to keep the city flood-free and spur tourism-related revenue. This development discourse, among others, was reflected in the state's plans to transform Guwahati into a 'sponge city', a concept that seeks to interconnect wetlands, rivers and drainage systems using engineered retention and drainage structures such as sluice gates to control urban flooding (GO2, 2023; GO6, 2023). In addition to the repeated emphasis on technocratic solutions that use wetlands for flood mitigation, interviews with state representatives revealed a strong interest in promoting tourism by transforming Guwahati's wetlands into recreational parks. A particularly relevant example concerns the state's current proposals to develop Ramsar site Deepor Beel into an 'international class' wetland park, inspired by wetland parks in cities such as Hong Kong, Singapore and Shanghai. For this, the state wants Deepor Beel to undergo massive reconstruction to establish modern amenities including watch towers, souvenir shops, eco-lodges, cycling lanes and boating facilities (Smart Cities Mission Statement and Guidelines, 2015), all designed for public consumption and aimed at generating revenue for the state. This will have drastic consequences for the Beel's biodiversity, however, as well as for the local communities dependent on it. As a state representative pointed out,

The whole ecology of the Deepor Beel will change. This is one question. I mean, if we develop it as a tourist spot, then neither migratory birds, nor elephants, nothing can come. The whole behaviour of the wetland will change. But people's apprehension about the livelihood, that will lessen. At this stage, they have the apprehension that we lost our land, we have lost our livelihood. But later, the system will be different (GO6, 2023).

State officials acknowledged the ecological and social costs of the Deepor Beel project, including the loss of livelihoods, the displacement of local communities dependent on the wetland, and impacts on wildlife; however, they generally adopted a pragmatic view of this drastic change to Guwahati's most significant wetland, considering it necessary for the city's progress. One respondent admitted that Deepor Beel would change with development and modernisation and that it would never be possible to bring it back to its original state (GO6, 2023). Such arguments indicate a willingness to accept changes to Deepor Beel in pursuit of broader development goals, a sentiment that was observed repeatedly in interviews with several state representatives.

This discourse, where urban development and financial gains are given precedence over the ecological state of wetlands and community concerns, appears to dominate and is being continuously reinforced by state practices. One such example concerns the 2001 construction of the railway line through the southern section of Deepor Beel, despite its status as an elephant corridor. While constructing the railway through the northern part of the Beel was also an option, a respondent (NGO1, 2023) pointed out that several powerful institutions had played a determining role in having the railway relocated along the northern route; these included the Assam Engineering College, Guwahati University and the Tata Institute of Social Sciences, all of whom were not willing to tolerate the railway's nuisance and thus prioritised their convenience over ecological and community needs.

Other instances of 'green grab' include the state's large-scale eviction drives in 2022 and 2023 at Silsako Beel, which evicted around a thousand low-income families under the pretext of wetland restoration and development (Scheidel and Work, 2018). Some accused the state of at the same time granting land to industries and the affluent; it was suggested that this reflected a class division that prioritised the rich and powerful over genuine wetland conservation. Two respondents (LR7, 2023; NGO1, 2023) reported instances of land acquisition that were facilitated by bribery and private investment; in the process, wetland areas that had once been commonly owned were converted into exclusive warehouses and business properties that benefited only certain affluent groups in the city. Some

respondents (LR7, 2023; M1, 2023) highlighted concerns about corruption and mismanagement of wetland development funds; for example, despite significant financial allocations, tangible improvements to Deepor Beel remain elusive to date, with respondents questioning the transparency and effectiveness of these investments. Accordingly, longstanding issues such as the presence of two dumping grounds near Deepor Beel (Figure 2) indicate inconsistent prioritisation of ecological concerns. As one respondent (M1, 2023) pointed out,

When you can build a flyover where you have spent hundreds of crores<sup>2</sup> of rupees, and you claim that you have finished the project before time, but you are delaying the shifting of the dump yard for the past 18 years, that shows their priorities. So even if they may come up with so many conservation plans for this project, the wetland we have on the ground shows the actual real picture.

All in all, despite advocacy efforts, such negligence and practices continue to intersect to maintain the dominance of the state's 'development' discourse in Guwahati's wetlands.

### **Are wetlands a conservation area?**

While the state is enamoured with the large-scale infrastructure projects for which it aims to leverage the city's wetlands, interviews revealed that Guwahati's residents are increasingly detached from these natural ecosystems, influenced by the currents of neoliberal globalisation and urban leisure. As a result, a substantial part of Guwahati's population now seems to neglect the wetlands' intrinsic values and the ecological services they provide. Instead, they regard them as resources to be exploited for profit and/or converted into modern urban infrastructure.

This can also, to some extent, be attributed to the transition in ownership of wetland territories. Over the years, many families who lived around wetlands have sold their properties and moved elsewhere due to various economic, ecological and/or social pressures. Some, for example, lost their livelihoods as water quality degraded and agricultural and fishery yields plummeted, while others were forcibly evicted by the state. Over time, this has resulted in a weakening of cultural and spiritual interactions with the wetlands; it has also caused a shift in how wetlands are perceived and treated. The newcomers who acquired these people's properties were often more affluent and influential and came from outside the region. As a result, they simply do not have the same emotional and cultural attachment to the wetlands, nor do their livelihoods depend on them in the way that traditional wetland fishing communities such as the *Kachari* tribe did; instead, they often prioritise modern infrastructural amenities such as shopping malls. This shift was evident from interviews in which many individuals expressed contentment with, or even a strong desire for, further road development and additional infrastructure improvements in the Deepor Beel locality (LR2, 2023; LR3, 2023; LR4, 2023; LR6a/b, 2023; LR10, 2024). Respondents associated more infrastructure in and around the wetlands with enhanced quality of life; they also expected more tourists to visit the wetlands and hence foresaw a boost in economic gains for those with tourism-dependent livelihoods. The importance of the wetland's ecosystem in light of these infrastructural development aspirations remained unrecognised.

A similar sentiment was described by another respondent (GO1, 2023), who mentioned encountering numerous people who were discontented with the elephant corridors and with the declaration of an eco-sensitive zone in the Deepor Beel area, as they considered them to be hindrances to development. Indeed, one respondent (LR6b, 2023) reported that he finds the elephants problematic because they sometimes disrupt his commute to work or block his path, posing a danger on the road.

These findings suggest that, overall, people in Guwahati are increasingly disengaged from their natural environment, including wetlands. They accept their degradation and the associated loss of biodiversity as an inevitable consequence of the city's strongly desired development. Their reasoning sometimes also

---

<sup>2</sup> A crore is a unit in the Indian numbering system that denotes 10 million.

includes the notion that the wetlands are already heavily polluted, which for them throws into question the whole point of being further concerned about them. This viewpoint was mirrored by a respondent's (LR10, 2024) proposal to preserve only the designated forest reserves in Assam, such as Kaziranga, Manas and Nameri National Parks. They even put forward the Assam State Zoo as a suitable habitat for wildlife, rather than making an effort to preserve Guwahati's wetlands and their biodiversity.

All in all, the public's desire for modern infrastructure in Guwahati, without consideration of the wetlands' ecological values, reflects a broader social change in which tangible, immediate improvements are prioritised over long-term environmental wellbeing. This alignment with the state's discourse shows how the state to some extent responds to, and legitimises, these societal ambitions. Thus the public's desire for urban development, supported by state policies, shapes the discourse on Guwahati's wetlands and, at the same time, reinforces the state's unchallenged dominance.

### **A cycle track versus migratory birds**

Amid the tide of urban expansion that brings these development-oriented discourses, there are also dissenting voices from concerned citizens who advocate protecting wetlands (nature) and their ecological integrity and value. This smaller fraction of Guwahati's population challenges the dominant development discourse among citizens and from the state. They advocate preserving wetlands as urban commons, recognising their intrinsic ecological and cultural significance. These individuals not only represent civil society but are also part of local communities that have traditionally relied on, or still at least partially rely on, wetlands for their livelihoods.

Interviews with both civil society actors and wetland-dependent individuals revealed that over the past couple of decades, many traditional livelihoods have been disrupted by increased pollution and the destruction of wetland habitats. With the steady increase in the flow of the city's untreated sewage into Deepor Beel, and with the seepage of effluent from first the West Boragaon garbage dump (between 2008 and 2021), and then from the Belortol since 2021; the water became heavily polluted, depleting fish stocks and ultimately forcing many fishermen to seek alternative livelihoods. A former fisherman (LR8, 2023) explained that many in his community, as well as in other local fishing communities, have gradually adopted other livelihoods as the wetlands have become degraded. He reported knowing many former fishermen who had moved elsewhere and whose children were now in alternative occupations, indicating a declining ability to pursue fishing as a livelihood.

Alongside the negative impacts on fish stocks and thus on fishermen, wetland encroachment and pollution have also caused the wetlands' native vegetation to vanish. Traditionally, wetland communities collected a variety of aquatic plant species from wetlands for income or for day-to-day purposes such as making medicines, using as animal fodder or biofertiliser, or making handicrafts or ritual ornaments. Lotus flowers, for instance, were regularly collected from wetlands for sale in markets or for supply to local temples, and *makhana* (the popped seeds of the lotus flower) were often sourced from wetlands for consumption as snacks. These resources have become increasingly scarce over time, threatening the livelihoods of communities that are (at least partly) dependent on the collection and sale of these aquatic species. A respondent who runs a dairy farm adjacent to Deepor Beel (LR5, 2023), explained how the disappearance of aquatic plants now forces him to take his cattle towards the hillside. The route poses significant risks, including traffic collisions and potential leopard attacks, and raises concerns about human-wildlife conflict. The respondent further explained that the lack of vegetation around Deepor Beel also means that he sometimes must feed his cattle the water hyacinths that are invading the Beel, and that they sometimes consume plastic waste, dangerously compromising their health.

In addition to the challenges of cattle farming, local people report that cultivating vegetables and paddy for human consumption in the Deepor Beel area is now almost entirely unfeasible. Some respondents (LR5, 2023; LR7, 2023; NGO1, 2023) described various attempts to cultivate the land, but poor water quality and solid waste pollution led to the failure of all efforts, ultimately forcing people to

change livelihoods or move elsewhere. Overall, these residents' stories vividly convey a profound sense of loss, not only in terms of livelihood but also of cultural and emotional connections. Indeed, multiple respondents (LR1, 2023; LR5, 2023; LR7, 2023; LR8, 2023) stressed that the overall pleasure they had formerly gained from their association with wetlands had now vanished. These people thus strongly oppose the state's plans to develop the city's wetlands, and particularly Deepor Beel, into a tourist park.

As one respondent (LR9, 2024) argued,

It [Deepor Beel] should remain as a natural. Making a path means what? You are allowing more people to walk around. It is not a park. If it is an artificial park, yes, you make a cycling track. But it's [a] natural one because animals come there. Animals will not understand that now.

The emotion and the language reflect a discourse that is centred on preserving the wetlands in their natural state, free from outside or human interventions such as concrete pathways, cycle tracks and lighting. He went on to say that,

The tourists will automatically come. Suppose if you keep it more natural, more birds will come, more animals will come; people will be attracted to that. The artificial lighting and all, that is not attractive. (...). Then making concrete walls or roads and all, it is meaningless. If I want to cycle, I can cycle on the road, isn't it? Why should I go and cycle around the Deepor Beel? What is the extra cycling over there? This is already a natural thing. People are already attracted. We should not spoil it.

The respondent thus critiqued tourist-centric development approaches that prioritise human recreation over ecological integrity. He instead recognised the inherent worth and rights of the non-human elements of nature. Such an environmentally aware perspective was also evident in the context of the construction of the railroad at Deepor Beel, which divided the wetland into two parts. Interviews revealed that many were disadvantaged by this railway line and showed deep concerns about the hampering of wetland-animal interactions (LR1, 2023; LR5, 2023; LR7, 2023; AC2, 2023; NGO1, 2023; NGO2, 2024). One respondent (LR5, 2023) highlighted that the frequent running of passenger and freight trains on this track has led to numerous collisions and elephant fatalities over the years. Since the construction of this railway track in 2001, many locals have demanded its diversion or other measures to protect elephants and other wildlife. Particularly with recent electrification plans and the construction of another railway line, people worry about the disturbance this creates to the local ecology.

In February 2024, however, the National Board for Wildlife (NBWL) approved two elevated railway corridors in Deepor Beel (*The Sentinel*, 2024). Construction had come to a halt in 2018 following objections by the National Green Tribunal, but it is now expected to resume. While some seem to have accepted and welcomed the elevation of the railway corridors, several of our respondents remained extremely concerned about noise pollution and the safety of native and migratory birds.

## DISCUSSION

In Guwahati, the state discourse primarily positions wetlands as being pivotal to modernity, emphasising the benefits of (re)engineering them to control urban flooding and of developing them into modern leisure zones to attract domestic and international tourists. Many interviewees from Guwahati appeared to align with the state's development discourse, perceiving a need for infrastructure improvements and economic growth. These residents associate development with improved quality of life, even if it is at the cost of wetland preservation. A counter-discourse also exists, however, it is voiced by civil society and several local communities and is made up of people who foreground the intrinsic social, cultural and ecological significance of wetlands. People who take this position demand the protection and restoration of water bodies in their natural state. For them, wetlands are not only functional spaces or resources; they are 'places' with deeply imbued historical and emotional relations.

The continuous tension between development ambitions and ecological concerns underscores the complex power dynamics at play. While conducting this study, it became evident that the state's development discourse continues to dominate. Driven by its vision of transforming Guwahati into a modern city, the state embraces the larger narrative of modernity, positioning infrastructural expansion as the key to progress. In this context, the conversion of wetlands into flood-control zones and tourist parks becomes a strategic move that aligns with the modern infrastructure ideal. By presenting their wetland development plans as inevitable and necessary for the city's (economic) development and progress, the state legitimises and reinforces its power to shape Guwahati's future (Shatkin, 2011; Vij et al., 2025). This dominance is sustained and reinforced by state capture and corruption, which overshadows the voices of local communities and other nature-conscious citizens. This further contributes to their marginalisation, dispossession and, at times, displacement. In the meantime, the state's development discourse is amplified, promoting the commodification of wetlands for revenue rather than their preservation for their intrinsic value.

The dominance of the state's development discourse in alignment with the modern infrastructure ideal raises critical questions about the future of Guwahati's wetlands as urban commons. Now primarily viewed and treated as practical land for urban flood control and tourism-related income generation, wetlands are losing their natural functioning, which in turn heightens their ecological subtractability. At the same time, urban development creates additional subtractability through restricted access and the exclusion of citizens from the joint benefits they provide such as supporting traditional livelihoods, promoting biodiversity, and serving as open-access leisure zones. As they move towards becoming sites where their purpose, utilisation and accessibility will be determined by the state, the very principles of what makes them urban commons are undermined, leading the wetlands to lose their status as such.

The disappearance of urban commons risks exacerbating social inequalities by prioritising urban development over equitable resource governance; this has significant consequences, particularly for Guwahati's economically disadvantaged residents. While creating modern wetland parks would be financially beneficial for the government, these parks would presumably do little for local communities; indeed, they would undermine their ability to use wetland areas for any purpose other than those designated by the state. When urban commons are converted into state-regulated zones, only the 'consumer' is expected to be granted access and rights to the space (Harriss, 2007; Hazarika and Kumar, 2022). According to Kundu (2003: 3085), the process of allocating land for the state's desired commercial endeavours (with economic gains in mind) is accomplished by "pushing out low valued activities" from these areas for the sake of urban development. Banerjee-Guha (2009: 96) says further that state governments are "undergoing drastic transformations in their form and governance to become equipped to function as incubators of neoliberal strategies in the Global South". This is also argued by Shatkin (2011), who, through an examination of various Asian globalising cities, highlights how contemporary urban development projects often present efforts to realise a privatised model of urban planning in order to achieve state goals of globalising urban economies. The findings of this study suggest a situation that is similar to that of Guwahati's wetlands.

The development discourse, accompanied by the disappearance of Guwahati's urban commons, also challenges the notion of wetlands as places imbued with social, cultural and ecological relations. In an attempt to become modern and developed, the state's plans seem to adhere to a uniform standard model, exemplified by plans to develop Deepor Beel into a modern tourist park modelled on Hong Kong's wetland park and Singapore's vision of a modern city. The sense of place, however, is eroded in the process of replicating successful urban projects from elsewhere to enhance a city's aesthetics and attract global investments. 'Places' become 'spaces' as wetlands are transformed into modern, sanitised environments devoid of historical and cultural continuity. The term 'placelessness' can be applied here, reflecting "a weakening of the identity of places to the point where they not only look alike but feel alike and offer the same bland possibilities for experience" (Relph, 1976: 90). This phenomenon is mirrored in the state's plans for the development of Guwahati's wetlands, which risk losing their unique sense of

place and becoming mere spaces. Though we wish to emphasise that new forms of meaning-making may ultimately emerge within these developed environments, that possibility seems to be unevenly distributed, as this process entails hindering certain groups from meaningful engagement with wetlands. The resulting loss of community attachment to wetlands also seems to reinforce a further loss of environmental consciousness among the residents of Guwahati, with more people sharing the state's aspiration for modern infrastructure and overall urban development at the cost of the city's wetlands.

The current loss of wetlands as urban commons, with places turning into spaces, reflects the essence of neoliberal governance, where profit is prioritised over common goods (Zetland, 2022). The convergence of state and citizen ambitions thereby clearly shows how these neoliberal urban ideologies influence different parts of society, yet this persistent conflict with the environmental discourse underscores the contested nature of urban commons. The question remains whether urban commons such as Guwahati's wetlands can continue to exist in a city driven by neoliberal development ambitions, or whether they will be reconfigured from meaningful places into spaces that are valued solely for their functionality in urban expansion and economic growth. Such transformations also contribute to increasingly divergent ideologies among citizens with regard to what wetlands should be, which in turn creates fractures within communities over their value, purpose and future (Myers, 2008).

This phenomenon, however, is not unique to Guwahati. Similar tensions have been documented in other Indian urban contexts where neoliberal urbanism fosters diverse citizen perspectives, producing ideological fractures that complicate governance and reinforce inequalities (D'Souza and Nagendra, 2011; Nagendra, 2016; Narain and Vij, 2016; Ranganathan, 2014; Unnikrishnan et al., 2016). Given the current vulnerability of Guwahati's urban commons, this study emphasises the need for more inclusive policies that balance development with ecological preservation and community rights. In this way, wetlands will be safeguarded as urban commons and meaningful places, rather than as state-controlled, commodified spaces.

## CONCLUSION

This article presented the contestations between different discourses surrounding wetlands in the city of Guwahati, India. To examine the shifting valuations of these vital water bodies, we conducted critical discourse analysis, conceptualised Guwahati's wetlands as urban commons, and drew on the concept of wetlands as 'places' or 'spaces'. Findings reveal that the state discourse views wetlands predominantly as practical tools for urban development; this is reflected in the state's embrace of the idea of utilising wetlands to create a modern 'sponge city' and to attract (inter)national tourists. Guwahati's residents appear to be increasingly echoing this view of wetlands as resources to foster urban growth, similarly, favouring economic progress and infrastructural expansion over wetland preservation.

There are civil society groups and local communities who are actively calling for the protection of wetlands and who strongly oppose this utilitarian viewpoint. This study finds, however, that the state's development objectives are progressively shaping the future of the city's water bodies. Under the state's current plans to transform them into engineered flood-control zones and tourist parks, traditional wetland-related livelihoods and community interactions are rapidly fading, while the broader community ethos is neglected, threatening the very concept of urban commons. The loss of wetlands' status as urban commons also accelerates their progression from being places of intrinsic and communal significance to becoming abstract spaces that are stripped of their original purpose and function. This change signals a weakening of communal and ecological importance and resonates with the larger urban processes of commodification and resource exploitation that are associated with neoliberal urbanisation. These findings have implications for understanding urban commons. They underscore the vulnerability of commons and highlight the necessity of engaging in more inclusive and balanced decision-making to rethink their value, not just as functional assets but as key contributors to Guwahati's urban life and long-term sustainability.

## ACKNOWLEDGEMENTS

We acknowledge the reviewers and editors for constructive comments on the earlier drafts of this article. The authors would like to acknowledge the Peri-Nature project, funded by FORMAS (project no. 2023-00929) and the Sector plan initiative (2023-28) at Wageningen University, the Netherlands. Special thanks to Prof Anamika Barua and Shankar Ghosh at IIT Guwahati for supporting the authors during the fieldwork in Guwahati, India. All errors or oversights are the responsibility of the authors.

## REFERENCES

- Akhtar, M. 2017. Guwahati's smart city dreams dependent on wetlands. *Dialogue Earth*. 17 March 2017, <https://dialogue.earth/en/climate/guwahatis-smart-city-dreams-dependent-on-wetlands/>
- Alba, R.; Kooy, M. and Bruns, A. 2022. Conflicts, cooperation and experimentation: Analysing the politics of urban water through Accra's heterogeneous water supply infrastructure. *Environment and Planning E: Nature and Space* 5(1): 250-271.
- Banerjee-Guha, S. 2009. Neoliberalising the "urban": New geographies of power and injustice in Indian cities. *Economic and Political Weekly* 44(22): 95-107.
- Bera, S. 2011. Who messed it up? Guwahati indicts poor settlers for flash floods, ignores damage on wetlands by construction work. *Down To Earth*. 15 September 2011, <https://www.downtoearth.org.in/environment/who-messed-it-up-33915>
- Borah, G. 2023. Wetlands of Assam and its threat. *The Sentinel*. 2 September 2023, <https://www.sentinelassam.com/more-news/editorial/wetlands-of-assam-and-its-threat-635676>
- Borah, J. and Gogoi, B. 2012. Growth of slum areas and changing land use pattern in Guwahati city, India. *The Clarion-International Multidisciplinary Journal* 1(2): 189-195.
- Dahl, B.; Andrews, T. and Clancy, A. 2013. Contradictory discourses of health promotion and disease prevention in the educational curriculum of Norwegian public health nursing: A critical discourse analysis. *Scandinavian Journal of Public Health* 42(1), <https://doi.org/10.1177/1403494813502585>
- Das, M. 2022. Guwahati: Road construction chokes Bondajan channel, experts warn of disaster. *Times of India*. 11 May 2022, <https://timesofindia.indiatimes.com/city/guwahati/road-construction-chokes-bondajan-channel-experts-warn-of-disaster/articleshow/91479293.cms>
- Das, B. 2024. Untreated legacy waste is polluting the sensitive wetland ecosystem of Deepor Beel. *Mongabay*. 24 August 2024, <https://india.mongabay.com/2022/08/untreated-legacy-waste-is-polluting-the-sensitive-wetland-ecosystem-of-deepor-beel/>
- Deb, S.; Saikia, J. and Kalamdhad, A.S. 2019. Ecology of Deepor Beel Wetland, a Ramsar site of Guwahati, Assam, with special reference to the algal community. *European Journal of Biomedical and Pharmaceutical Sciences* 6(5): 232-243.
- Ramsar Sites Information Service. 2002. *Deepor Beel*. August 19, 2002, <https://rsis Ramsar.org/ris/1207>
- Dhyani, S.; Basu, M.; Santhanam, H. and Dasgupta, R. 2022. Blue-green infrastructure across asian countries: Improving urban resilience and sustainability. In *Blue-Green Infrastructure Across Asian Countries: Improving Urban Resilience and Sustainability*. Springer Nature.
- Díaz-Pinzón, L.; Sierra, L.; Trillas, F. and Verd, J.M. 2024. The social-ecological system framework of urban wetlands: The role of collective management at local level. *International Journal of the Commons* 18(1): 649-699.
- D'Souza, R. and Nagendra, H. 2011. Changes in public commons as a consequence of urbanization: The Agara lake in Bangalore, India. *Environmental Management* 47(5): 840-850.
- Fairclough, N. 1995. *Critical discourse analysis: The critical study of language*. Longman. Routledge.
- Foster, S.R. 2011. Collective action and the urban commons. *Notre Dame Law Review* 87(1): 57-134.
- Friedland, R. 1992. *Space, place, and modernity: The Geographical Moment* 21(1): 11-15.
- Furlong, K. 2014. STS beyond the "modern infrastructure ideal": Extending theory by engaging with infrastructure challenges in the South. *Technology in Society* 38: 139-147.
- Gidwani, V. and Baviskar, A. 2011. Urban commons. *Economic and Political Weekly* 46(50): 42-43.

- Gogoi, L. 2013. Degradation of natural resources and its impact on environment: A study in Guwahati City, Assam, India. *International Journal of Scientific and Research Publications* 3(12).
- Gohain, S.B. and Bordoloi, S. 2021. Impact of municipal solid waste disposal on the surface water and sediment of adjoining wetland Deepor Beel in Guwahati, Assam, India. *Environmental Monitoring and Assessment* 193(5): 278, <https://doi.org/10.1007/s10661-021-09040-y>
- Graham, S. and Marvin, S. 2001. *Splintering urbanism: Networked infrastructures, technological mobilities and the urban condition*. Routledge Press.
- World Population Review. (n.d.). *Guwahati*. March 3, 2024, from <https://worldpopulationreview.com/cities/india/guwahati>
- Hardin, G. 1968. *The tragedy of the commons*. Hardin and Baden (Eds), *Managing the Commons*. San Francisco: WH Freeman.
- Harriss, J. 2007. Antinomies of empowerment: observations on civil society, politics and urban governance in India. *Economic and Political Weekly* 42(26): 2716-2724.
- Hazarika, N. and Kumar, C. 2022. Disappearing urban commons and emerging public spaces: A case study of wetlands in Guwahati city, Northeast India. *Indian Sociological Society* 6(2): 125-145.
- Hemani, S. and Das, A.K. 2016. City profile: Guwahati. *Cities* 50: 137-157.
- Huron, A. 2015. Working with strangers in saturated space: Reclaiming and maintaining the urban commons. *Antipode* 47(4): 963-979.
- Huron, A. 2017. Theorising the urban commons: New thoughts, tensions and paths forward. *Urban Studies* 54(4): 1062-1069.
- Karmakar, R. 2021. Assam's Deepor Beel Wildlife Sanctuary breathes easy after eco-sensitive zone notification. *The Hindu*, 27 August 2021, <https://www.thehindu.com/sci-tech/energy-and-environment/assams-deepor-beel-wildlife-sanctuary-breathes-easy-after-eco-sensitive-zone-notification/article36133229.ece>
- Kip, M.; Bieniok, M.; Dellenbaugh, M.; Müller, A.K. and Schwegmann, M. 2015. Seizing the (every) day: Welcome to the urban commons. In Dellenbaugh, M.; Kip, M.; Bieniok, M.; Müller, A.K. and Schwegmann, M. (Eds), *Urban commons: Moving beyond state and market*, pp. 9-25. Birkhäuser.
- Kornberger, M. and Borch, C. 2015. Introduction: Urban commons. In Borch, C. and Kornberger, M. (Eds), *Urban commons: Rethinking the city*, pp. 1-21. Routledge.
- Kundu, A. 2003. Urbanisation and urban governance: Search for a perspective beyond neo-liberalism. *Economic and Political Weekly* 38(29): 3079-3087.
- Lawhon, M.; Ernstson, H. and Silver, J. 2014. Provincializing urban political ecology: Towards a situated UPE through African urbanism. *Antipode* 46(2): 497-516.
- Lawhon, M.; Nsangi Nakyagaba, G. and Karpouzoglou, T. 2023. Towards a modest imaginary? Sanitation in Kampala beyond the modern infrastructure ideal. *Urban Studies* 60(1): 146-165.
- Lee, S. and Webster, C. 2006. Enclosure of the urban commons. *GeoJournal* 66: 27-42.
- Linebaugh, P. 2009. *The Magna Carta manifesto: Liberties and commons for all*. University of California Press.
- Linneberg, M. and Korsgaard, S. 2019. Coding qualitative data: A synthesis guiding the novice. *Qualitative Research Journal* 19(3): 259-270.
- Mahadevia, D.; Mishra, A. and Joseph, Y. 2017. Ecology vs housing and the land rights movement in Guwahati. *Economic and Political Weekly* 52(7): 58-65.
- Massey, D. 1994. *Space, place and gender*. Minneapolis, University of Minnesota Press.
- Mozumder, C.; Tripathi, N.K. and Tipdecho, T. 2014. Ecosystem evaluation (1989-2012) of Ramsar wetland Deepor Beel using satellite-derived indices. *Environmental Monitoring and Assessment* 186: 7909-7927.
- Myers, G.A. 2008. Peri-urban land reform, political-economic reform, and urban political ecology in Zanzibar. *Urban Geography* 29(3): 264-288.
- Nagendra, H. 2016. *Nature in the city: Bengaluru in the past, present, and future*. Oxford University Press.
- Narain, V. and Vij, S. 2016. Where have all the commons gone? *Geoforum* 68: 21-24.

- Ostrom, E. 1990. *Governing the commons: The evolution of institutions for collective action*. Cambridge university press.
- Pandit, S. 2016. Transformation of urban wetlands as an effect of urban development: An analysis of Deepor Beel in Guwahati, Assam. *Creative Space* 4(1): 103-114.
- Pritchard, D. 2022. Wetlands in culture and culture in wetlands. In *Ramsar Wetlands: Values, assessment, management*, pp. 417-421. Elsevier.
- Ranganathan, M. 2014. Paying for pipes, claiming citizenship: Political agency and water reforms at the urban periphery. *International Journal of Urban and Regional Research* 38(2): 590-608.
- Rehman, A.A. and Alharthi, K. 2016. An introduction to research paradigms. *International Journal of Educational Investigations* 3(8): 51-59.
- Relph, E. 1976. *Place and placelessness*. Pion.
- Roy, A. 2009. Why India cannot plan its cities: Informality, insurgence and the idiom of urbanization. *Planning Theory* 8(1): 76-87.
- Roy, S. and Kalita, J.C. 2011. Identification of estrogenic heavy metals in water bodies around Guwahati City, Assam, India. *International Journal of ChemTech Research* 3(2): 699-702.
- Saikia, J. 2019. Deepor Beel Wetland: Threats to ecosystem services, their importance to dependent communities and possible management measures. *Natural Resources and Conservation* 7(2): 9-24.
- Scheidel, A. and Work, C. 2018. Forest plantations and climate change discourses: New powers of 'green' grabbing in Cambodia. *Land Use Policy* 77, 9-18.
- Sharma, P.; Baruah, J.; Deka, D. and Kaushik, P. 2019. *Harnessing wetlands for sustainable livelihood*. Notion Press.
- Shatkin, G. 2011. Planning privatopolis: Representation and contestation in the development of urban integrated mega-projects. In Roy, A. and Ong, A. (Eds), *Worlding cities: Asian experiments and the art of being global*, pp. 77-97. Wiley.
- Government of Assam, 2015. *Smart cities, 2015. Mission statement and guidelines*. Government of Assam.
- Times of India*. 2024. Smoke, pollutants from dumping ground pose threat to Deepor Beel. February 22. <https://shorturl.at/OvMNR>
- Swyngedouw, E. 2015. *Contested hydro-modernities in twentieth-century Spain*. The MIT Press.
- Guwahati Municipal Development Authority, 2024. *Synopsis of Draft Revised Master Plan for GMA 2045*. Government of Assam.
- The Sentinel*. 2024. Elevated corridors in Deepor Beel to help restart track doubling work. *The Sentinel*. 24 September 2024, <https://www.sentinelassam.com/topheadlines/elevated-corridors-in-deepor-beel-to-help-restart-track-doubling-work>
- Unnikrishnan, H.; Mundoli, S. and Nagendra, H. 2016. Down the drain: The tragedy of the disappearing urban commons of Bengaluru. *South Asian Water Studies* 5(3): 7-11.
- van Hulst, M.; Metze, T.; Dewulf, A.; de Vries, J.; van Bommel, S. and van Ostaijen, M. 2024. Discourse, framing and narrative: Three ways of doing critical, interpretive policy analysis. *Critical Policy Studies* 19(1): 74-96.
- Vij, S.; Karpouzoglou, T.; Lawhon, M.; Deka, A. and Hazarika, N. 2025. infrastructure imaginaries, past, present, and future: Living with the urban flood in Guwahati, India. *Journal of Urban Technology*, 1-22.
- Vij, S. and Narain, V. 2016. Land, water and power: The demise of common property resources in periurban Gurgaon, India. *Land Use Policy* 50: 59-66.
- Wood, L.A. and Kroger, R.O. 2000. *Doing discourse analysis: Methods for studying action in talk and text*. Sage.
- Zimmer, A.; Véron, R. and Cornea, N.L. 2020. Urban ponds, environmental imaginaries and (un) commoning: An urban political ecology of the pondscape in a small city in Gujarat, India. *Water Alternatives* 13(2): 225-247.
- Zetland, D.J. 2022. *The little book of the commons*. KYSQ Press, Amsterdam.

